



Key Site PHILADELPHIA



Surface



Surveillance

Air Traffic Control



ADS-B

AUTOMATIC DEPENDENT SURVEILLANCE - BROADCAST

Traffic Information



Flight Information



PASS ANNO
PHILADELPHIA
DOOR

Philadelphia

Service Volume, Philadelphia Terminal Radar Approach Control and Air Traffic Control Tower Service Delivery Point

Infrastructure <ul style="list-style-type: none"> • 5 ADS-B radio stations for terminal coverage • 2 ADS-B radio stations for surface coverage of Philadelphia International Airport • Universal Access Transceiver • Multilateration • ASDE-X 	Service Volumes <ul style="list-style-type: none"> • Terminal service volume is 60nm radius around the airport <ul style="list-style-type: none"> – Floor of coverage based on Philadelphia's secondary surveillance radar coverage and minimum vectoring altitude; ceiling is 25,000 ft. • Surface service volume is 5nm radius around the airport <ul style="list-style-type: none"> – Floor is surface movement area – Ceiling is 200 ft. above ground level
Services <ul style="list-style-type: none"> • Air traffic control separation services <ul style="list-style-type: none"> – ADS-B / ADS-R • Flight Information Broadcast Services (FIS-B) • Traffic Information Broadcast Services (TIS-B) <ul style="list-style-type: none"> – Terminal area will receive the TIS-B source from the secondary surveillance radar – Surface area will receive the TIS-B source from the Airport Surface Detection Equipment – Model X (ASDE-X) Interface Protocols <ul style="list-style-type: none"> • Category 33 for position data reports and Category 023 service status reports 	Service Delivery <ul style="list-style-type: none"> • Primary service delivery point <ul style="list-style-type: none"> – STARS automation system at Philadelphia Terminal Radar Approach Control • Other service delivery points <ul style="list-style-type: none"> – Washington Center – New York Center – Philadelphia Air Traffic Control Tower for ASDE-X – Surveillance and Broadcast Services monitor receives service status reports and equipment status reports, as well as ADS-B, TIS-B and FIS-B data – FAA monitoring at the William J. Hughes Technical Center and the Aeronautical Center. Service certification is at the service delivery point for each automation platform • Delivery of TIS-B and FIS-B to aircraft equipped with ADS-B avionics and a multi-function display • Aircraft receiving TIS-B must be equipped with ADS-B 'Out' and 'In'; FIS-B requires ADS-B 'In'
Applications <ul style="list-style-type: none"> • Air traffic control surveillance • Air traffic control surface surveillance • Surface safety alerting • Enhanced visual acquisition • Enhanced visual approaches • Final approach and runway occupancy • Airport surface situational awareness (includes vehicles) • Conflict detection • Weather and NAS situational awareness 	Benefits <ul style="list-style-type: none"> • More efficient spacing on approach in visual meteorological conditions • FIS-B / TIS-B <ul style="list-style-type: none"> – Reduce risk of midair collisions – Reduce risk of weather-related accidents – More efficient routes in adverse weather – Improved situational awareness

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